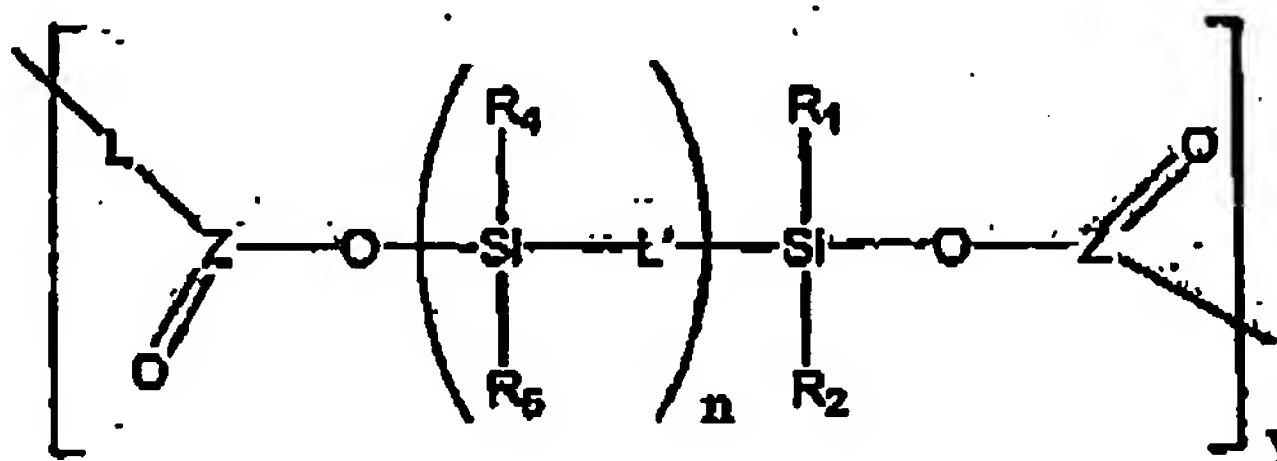


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## LISTING OF CLAIMS

1. (Currently Amended) A process for the preparation of poly(silyl ester)s comprising a structural unit of the formula (I)



(I)

wherein each  $R_4$  and  $R_5$  may be hydroxyl or may be independently selected from hydrogen, alkyl, cycloalkyl, aryl, alkoxyl, aryloxy,  $-L'-SiR_1R_2-$ ,  $-L'-SiR_4R_5R_{10}-L'-$   $(SiR_4R_5L')_n-SiR_1R_2-$ , alkenyl, alkynyl, aralkyl or aralkyloxy radicals optionally substituted by one or more substituents independently selected from the group comprising consisting of alkyl, alkoxyl, aralkyl, aralkyloxy, hydroxyl, aryl, aryloxy, halogen, amino ~~or~~ and amino alkyl radicals, or each  $R_4$  and/or  $R_5$  may independently be an  $-O-Z(O)-L-$  group, where  $R_{10}$  is defined as is  $R_7$  below,

wherein each  $R_1$  and  $R_2$  may independently represent hydrogen, hydroxyl, alkyl, cycloalkyl, alkenyl, alkynyl, alkoxyl,  $-L'-SiR_4R_5R_{10}$ , aryl, aryloxy, aralkyl or aralkyloxy radical optionally substituted by one or more substituents independently selected from the group ~~comprising~~ consisting of alkyl, alkoxyl, aralkyl, aralkyloxy, aryl, aryloxy, halogen, hydroxyl, amino ~~or~~ and amino alkyl radicals, or each  $R_1$  and/or  $R_2$  may independently be an  $-O-Z(O)-L-$  group,

wherein  $L$  represents a hydrocarbyl or substituted hydrocarbyl group, wherein said substituted hydrocarbyl is substituted by one or more substituents independently selected from the group ~~comprising~~ consisting of alkyl, cycloalkyl, carboxyl, substituted carboxyl, alkoxyl, aralkyl, aralkyloxy, aryl, aryloxy, hydroxyl, halogen, amino ~~or~~ and amino alkyl radicals, or a polymer with pendant acid groups,

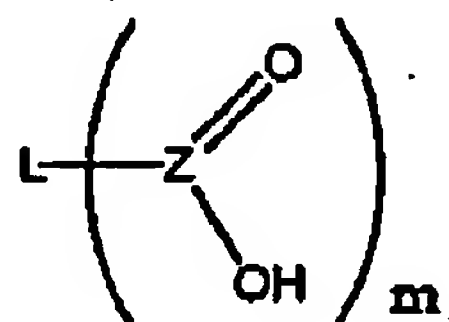
L' represents O, S, or NR<sub>6</sub>, or L- (NR<sub>6</sub>-L)<sub>p</sub> (where p = 1 to 10), where R<sub>6</sub> is defined as is R<sub>7</sub> below, or L,

each n independently represents a number of -Si(R<sub>4</sub>)(R<sub>5</sub>) - L' - groups from 0 to 1000,

and y represents a number of silyl ester repeat units from 2 to 100000,

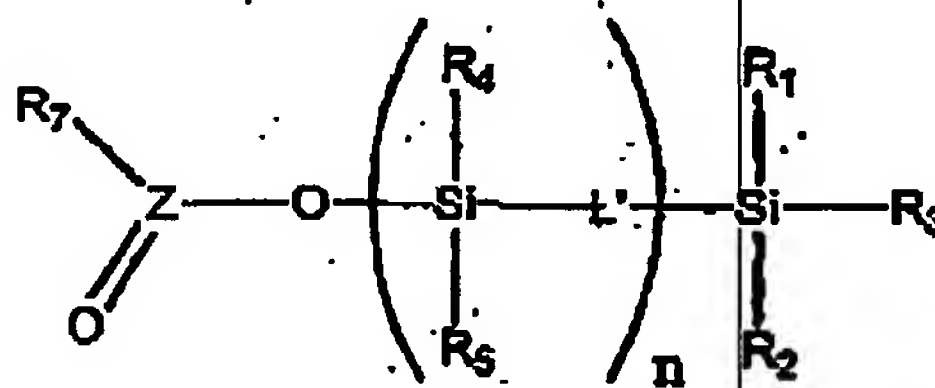
which process comprises the step of reacting;

a polyacid of formula (II)



(II)

wherein Z(O)OH represents the acid moiety attached to L, m is an integer from 2 to 100000, and L is as defined above, with a polyacyloxysilyl derivative of formula (III)



(III)

wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub>, R<sub>5</sub>, L' and n are as defined above, except R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> in (III) are -O-Z(O)-R<sub>8</sub>, where R<sub>8</sub> is defined as is in R<sub>7</sub> below, when the equivalent group in (I) is -O-Z(O)-L-, and R<sub>7</sub> is a hydrogen atom, an aralkyl, aryl, alkenyl, alkynyl, or alkyl group optionally substituted with on one or more substituents selected from the equivalent substituents as defined for R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> above,

and  $R_3$  is the group  $-O-Z-(O)-R_9$ , where  $R_9$  is defined as is  $R_7$  above,

whilst removing the formed acid group(s) of formula (IV) and (V) and (VI),

$R_7 Z(O)OH$  (IV)

$R_9 Z(O)OH$  (V),

$R_8 Z(O)OH$  (VI),

from the system, wherein  $Z$  in formula (I), (II), (III), (IV), (V), and (VI) is independently C, POH, P or S=O.

2. (Original) A process according to claim 1, wherein  $y$  is 2 to 1000.
3. (Previously Presented) A process according to claim 1, wherein  $R_4$  and  $R_5$  each independently represent alkyl, an alkoxyl, an aryl, an hydroxyl group or  $-L'-(SiR_1R_2)_n-SiR_1R_2-$  group, wherein  $L'$ ,  $R_1$ ,  $R_2$ ,  $R_4$  and  $R_5$  are as defined in claim 1.
4. (Original) A process according to claim 3, wherein  $n = 0-100$ .
5. (Original) A process according to claim 3, wherein  $n = 0-10$ .
6. (Original) A process according to claim 3, wherein  $n$  is 0 or 1.
7. (Currently Amended) A process according to claim 1, wherein  $R_4$  and  $R_5$  in formula (III) are each independently selected from the group comprising consisting of an alkyl group, an hydroxyl group, an alkoxyl group ~~or~~ and an  $L'-(SiR_1R_2)_n-SiR_1R_2-$  group, wherein  $L'$ ,  $R_1$ ,  $R_2$ ,  $R_4$  and  $R_5$  are as defined in claim 1.
8. (Original) A process according to claim 7 wherein  $R_1$ ,  $R_2$ ,  $R_4$  and  $R_5$  each independently represent an alkyl group, branched or linear.

9. (Previously Presented) A process according to claim 1, wherein L' represents O.
10. (Previously Presented) A process according to claim 1, wherein Z represents C, P OH, P or S=O.
11. (Currently Amended) A process according to claim 1, wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>8</sub> are each independently selected from the group ~~comprising~~ consisting of methyl, ethyl, propyl, isopropyl, isobutyl, n-butyl, sec-butyl, t-butyl, phenyl, and vinyl.
12. (Original) A process according to claim 11, wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub> and R<sub>5</sub> are selected from the group consisting of methyl, ethyl, isopropyl, phenyl, and vinyl.
13. (Original) A process according to claim 11, wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>4</sub>, R<sub>5</sub> and R<sub>8</sub> are methyl.
14. (Previously Presented) A process according to claim 1, wherein R<sub>6</sub> is methyl.
15. (Previously Presented) A process according to claim 1, wherein the groups R<sub>1</sub> and R<sub>2</sub> are the same.
16. (Previously Presented) A process according to claim 1, wherein the groups R<sub>7</sub> and R<sub>9</sub> are the same.
17. (Original) A process according to claim 16, wherein R<sub>7</sub> and R<sub>9</sub> are alkyl.
18. (Original) A process according to claim 16, wherein R<sub>7</sub> and R<sub>9</sub> are methyl.
19. (Original) A process according to claim 1, wherein the polyacid of formula (II) is a polycarboxylic acid.
20. (Original) A process according to claim 19, wherein the polycarboxylic acid is a dicarboxylic acid.

21. (Previously Presented) A process according to claim 1, wherein L represents an aryl, alkenyl, alkynyl, or aralkyl radical, or a polymer comprising 1 to 10000 carbon atoms.
22. (Previously Presented) A process according to claim 1, wherein L represents  $-(CH_2)_n-$ , and n is an integer between 1 and 10.
23. (Original) A process according to claim 20, wherein the dicarboxylic acid is selected from adipic acid, oxalic acid, succinic acid, glutaric acid, phthalic or isophthalic or terephthalic acids, di-lactic acid, and rosinous dicarboxylic acids.
24. (Original) A process according to claim 1, wherein the polyacyloxysilyl derivatives of formula (III) are selected from tetraisopropyl-1,3-diacetoxysiloxane, tetramethyl-1,3-diacetoxysiloxane, dimethyldiacetoxysilane, diethyldiacetoxysilane, diphenyldiacetoxysilane, vinylmethyldiacetoxysilane, methyltriacetoxysilane, ethyltriacetoxysilane, vinyltriacetoxysilane, phenyltriacetoxysilane, tetraacetoxysilane, (butanoic acid, 1,3,5-triethyl-1,3,5-tripropyl-1,5-trisiloxanediyl ester), (1,5-trisiloxanediol, 1,3,5-triethyl-1,3,5-tripropyl-, dipropionate), (2-silanaphthalen-2-ol, 1,2,3,4-tetrahydro-2-(7-hydroxy-1,1,3,3,5,5,7,7-octamethyltetrasiloxanoxy)-, diacetate), (2-silanaphthalen-2-ol, 1,2,3,4-tetrahydro-2-(5-hydroxy-1,1,3,3,5,5-hexamethyltrisiloxanoxy)-, diacetate), (2-silanaphthalen-2-ol, 1,2,3,4-tetrahydro-2-(3-hydroxy-1,1,3,3-tetramethyldisiloxanoxy)-, diacetate), (1,9-pentasiloxanediol, 1,3,5,7,9-pentamethyl-1,3,5,7,9-pentavinyl-, diacetate), (1,7-tetrasiloxanediol, 1,3,5,7-tetraethenyl-1,3,5,7-tetramethyl-, diacetate), (1,7-tetrasiloxanediol, 1,1,3,3,5,5,7,7-octaethyl-, diacetate), (1,5-trisiloxanediol, 1,3,5-triethenyl-1,3,5-trimethyl-, diacetate), (heptasiloxane, 1,1,1,1,3,3,3,3-octaacetoxysilane), (1,5-trisiloxanediol, 1,3,5-triethyl-1,3,5-tripropyl-, diacetate), (1,5-trisiloxanediol, 1,1,3,3,5,5-hexaethyl-, diacetate), (1,5-trisiloxanediol, 1,1,3,3,5,5-hexaethyl-, dipropionate), (1,5-trisiloxanediol, 1,3,5-triethyl-1,3,5-tripropyl-, diacetate), (1,5-trisiloxanediol, 1,1,3,3,5,5-hexaethyl-, diacetate), (1,1,1,7-tetrasiloxanetetrol, 3,3,5,5,7,7-hexamethyl-, triacetate),

(1,5-trisiloxanediol, 1,1,3,5,5-pentamethyl-3-vinyl-, diacetate), (1-tetrasiloxanol, 1-acetyl-1,1,3,3,5,5,7,7-octamethyl-, acetate), (1-pentasiloxanol, 9-acetyl-1,1,3,3,5,5,7,7,9,9-decamethyl-, acetate; pentasiloxanol, 9-acetyl-1,1,3,3,5,5,7,7,9,9-decamethyl-, acetate), (1,9-pentasiloxanediol, decamethyl-, diacetate), (1,5-trisiloxanediol, hexamethyl-, diacetate), (1,17-nonasiloxanediol, octadecamethyl-diacetate), (1,15-octasiloxanediol, hexadecamethyl-, diacetate), (1,7,13-heptasiloxanetriol, tridecamethyl-, triacetate), (1,1,7-tetrasiloxanetriol, 1,3,3,5,5,7,7-heptamethyl-, triacetate), (1,13-heptasiloxanediol, tetradecamethyl-, diacetate), (1,7-tetrasiloxanediol, 1,1,3,3,5,5,7,7-octamethyl-, diacetate), ditert-butyl diacetoxysilane, and ditert-butoxydiacetoxysilane.

25. (Previously Presented) A process according to claim 1, wherein the reaction is carried out in a suitable solvent.
26. (Original) A process as claimed in claim 25, wherein the solvent is selected from pentane, cyclopentane, hexane, cyclohexane, heptane, toluene, xylene, benzene, mesitylene, ethylbenzene, octane, decane, decahydronaphthalene, diethyl ether, diisopropyl ether, diisobutyl ether, N,N-dimethylformamide, N-methylpyrrolidone, N,N-dimethylacetamide, and mixtures thereof.
27. (Previously Presented) A process according to claim 25, wherein the solvent forms a heterogeneous low boiling azeotrope with the distilled acid product.
28. (Previously Presented) A process according to claim 1, wherein the molar ratio of the reactive groups present in the polyacyloxysilyl derivative:acid is between 1:100 and 100:1.
29. (Previously Presented) A process according to claim 1, wherein the solvent, when present, is at least 10 wt% of the total reaction mix at the start of the reaction.



30. (Previously Presented) A process according to claim 1, wherein the molecular weight is in the range 1000 to 1000000 kD.
31. (Original) A process according to claim 30, wherein the molecular weight is in the range 1000 to 100000 kD.
32. (Original) A process according to claim 30, wherein the molecular weight is in the range 1000 to 10000 kD.
33. (Previously Presented) A process according to claim 1, wherein  $m$  is 2.
34. (Currently Amended) A process according to claim 1, wherein each  $R_4$  and  $R_5$  may be is hydroxyl or ~~may be~~ is independently selected from alkyl, aryl, alkoxyl, aryloxy,  $L'$ - $SiR_1R_2$ -,  $-L'-(SiR_4R_5 L')_n-SiR_1R_2$ -, alkenyl, alkynyl, aralkyl or aralkyloxy radicals optionally substituted by one or more substituents independently selected from the group ~~comprising~~ consisting of alkyl, alkoxyl, aralkyl, aralkyloxy, hydroxyl, aryl, aryloxy, halogen, amino ~~or~~ and amino alkyl radicals, or  $R_4$  or  $R_5$  may independently be an  $-O-C(O)-L$ - group;

wherein each  $R_1$  and  $R_2$  may independently represent hydrogen, hydroxyl, alkyl, alkenyl, alkynyl, alkoxyl, aryl, aryloxy, aralkyl or aralkyloxy radical optionally substituted by one or more substituents independently selected from the group ~~comprising~~ consisting of alkyl, alkoxyl, aralkyl, aralkyloxy, aryl, aryloxy, halogen, hydroxyl, amino ~~or~~ and amino alkyl radicals, or  $R_1$  or  $R_2$  may independently be an  $-O-C(O)-L$ - group,

wherein  $L$  represents a hydrocarbyl or substituted hydrocarbyl group, wherein said substituted hydrocarbyl is substituted by one or more substituents independently selected from the group ~~comprising~~ consisting of alkyl, alkoxyl, aralkyl, aralkyloxy, aryl, aryloxy, hydroxyl, halogen, amino ~~or~~ and amino alkyl radicals, or a polymer with pendant acid groups; and

L' represents O, S, or NR<sub>6</sub>, where R<sub>6</sub> is defined as is R<sub>7</sub>, or L.

35. (Previously Presented) A process according to claim 1 which includes the additional step of incorporating the polymer in a film or coating composition.
36. (Canceled)
37. (Previously Presented) A film or coating comprising a polymer as prepared or obtainable by a process as defined in claim 1.
38. (Previously Presented) A poly(silyl ester) prepared or obtainable by a process as defined in claim 1.
39. (Previously Presented) A coating or film composition comprising a poly(silyl ester) as prepared or obtainable by a process in accordance with claim 1.
40. (Previously Presented) A poly (silyl ester) comprising the repeating group (I) as defined in claim 1, and wherein L is a polylactic acid or substituted polylactic acid residue or a rosin or substituted rosin residue of a polycarboxylic acid.
41. (Original) A coating or film composition comprising a poly(silyl ester) according to claim 40.
42. (Previously Presented) A coating or film composition according to claim 39 wherein the composition is an antifouling coating or film composition.
43. (Previously Presented) A coating or film composition according to claim 39 wherein the composition is suitable for use in medical and/or veterinary applications to provide controlled release of a bioactive substance.



44. (Previously Presented) A film or coating comprising a poly(silyl ester) as prepared or obtainable by a process in accordance with claim 34.
45. (Previously Presented) An implantable medical and/or veterinary device having a coating comprising a coating or film composition according to claim 39.
46. (Previously Presented) A process according to claim 1, wherein in the definitions of  $R_1$ ,  $R_2$ ,  $R_4$  or  $R_5$ , the amino radical is a tertiary amino radical.
47. (Previously Presented) A process according to claim 10, wherein Z represents C.
48. (Currently Amended) A process according to claim 22, wherein L represents  $-(Cl)_n-$ , and n is an integer between 2 and 8.
49. (Currently Amended) A process according to claim 22, wherein L represents  $-(Cl)_n-$ , and n is an integer between 4 and 6.
50. (Previously Presented) A process according to claim 22, wherein L represents  $-(CH_2)_n-$ , and n is 4.
51. (Previously Presented) A coating or film composition according to claim 41 wherein the composition is suitable for use in medical and/or veterinary applications to provide controlled release of a bioactive substance.
52. (Previously Presented) An implantable medical and/or veterinary device having a coating comprising a coating or film composition according to claim 41.